

**EMSL Analytical**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856)858-4800 / (856)858-4571

<http://www.EMSL.com> to15lab@EMSL.com

EMSL Order #:	491800000
EMSL Sample #:	491800000-1
Customer ID:	EMSL50
Customer PO:	NA

Attn: **Lance Romance**
EMSL Analytical-Air Toxics Lab
200 US Route 130 N
Cinnaminson, NJ 08077

Phone: **800-220-3675**
 Fax: **856-786-0327**
 Date Collected: **2/6/2018**
 Date Received: **2/7/2018**

Project: **Example format for clients**Sample ID: **Barb's Bird Room**

<u>Analysis</u>	<u>Analysis Date</u>	<u>Analyst Init.</u>	<u>Lab File ID</u>	<u>Canister ID</u>	<u>Sample Vol.</u>	<u>Dil. Factor</u>
Initial	02/13/2018	KW	K14736.D	HD4365	250 cc	1
Dilution1	02/14/2018	KW	K14753.D	HD4365	50 cc	5

Possible Background Sources of Contaminants

Target Compounds	CAS#	Result ppbv	Q	Result ug/m3	Use and Possible Sources
Chloromethane	74-87-3	0.78		1.6	Most (99%) of the chloromethane in the environment comes from natural sources. Because chloromethane is made in the oceans by natural processes, it is present in air all over the world. In most areas, the outside air contains less than 1 part of chloromethane in a billion parts of air (ppb). In cities, human activities, mostly combustion and manufacturing, add to the chloromethane in the air, resulting in somewhat higher levels, up to 1 ppb. Cigarette smoke, polystyrene insulation, and aerosol propellants; home burning of wood, coal, or certain plastics; and chlorinated swimming pools. ⁴
n-Butane	106-97-8	65	D	160	Aerosol spray products for some paints, cosmetics, automotive products, leather treatments, pesticides. ²
Ethanol	64-17-5	450	DE	850	Hand sanitizers, disinfecting wipes. Personal care products: nail polish, nail polish remover, colognes, perfumes, rubbing alcohol, hair spray. ²
Isopropyl alcohol(2-Propanol)	67-63-0	17		41	Eye Glass Cleaners. Disinfecting wipes. Personal care products: nail polish, nail polish remover, colognes, perfumes, rubbing alcohol, hair spray. ²
Acetone	67-64-1	48	D	120	Rubber cement, cleaning fluids, scented candles and nail polish remover. ¹
n-Hexane	110-54-3	0.80		2.8	Gasoline, rubber cement, typing correction fluid and aerosols in perfumes. ¹
2-Butanone(MEK)	78-93-3	1.5		4.4	2-Butanone is produced in large quantities. Nearly half of its use is in paints and other coatings because it will quickly evaporate into the air and it dissolves many substances. ⁴ Can occur from automobile exhaust, printing inks, fragrance/flavoring agent in candy and perfume, paint, glue, cleaning agents and cigarette smoke. ¹
Ethyl acetate	141-78-6	4.4		16	Personal care products: nail polish, nail polish remover, colognes, perfumes, rubbing alcohol, hair spray. ²
Chloroform	67-66-3	1.0		5.1	Chloroform is used to make other chemicals and can also be formed in small amounts when chlorine is added to water. ⁴ Generated from chlorinated water (showers). ¹
2,2,4-Trimethylpentane(Isooctane)	540-84-1	0.85		4.0	Gasoline additive for anti-knocking and will occur in automobile exhaust. ¹
Benzene	71-43-2	1.7		5.4	Automobile exhaust, gasoline, cigarette smoke, scented candles, scatter rugs and carpet glue. ¹
Toluene	108-88-3	3.7		14	Toluene is produced in the process of making gasoline and other fuels from crude oil and making coke from coal. Will occur in gasoline exhaust. Toluene is used in making paints, paint thinners, fingernail polish, lacquers, adhesives, and rubber and in some printing and leather tanning processes. ⁴
Tetrachloroethene	127-18-4	3.0		20	Tetrachloroethylene is a manufactured chemical that is widely used for dry cleaning of fabrics and for metal-degreasing. It is also used to make other chemicals and is used in some consumer products. ⁴

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Possible Background Sources of Contaminants

Target Compounds	CAS#	Result ppbv	Q	Result ug/m3	Use and Possible Sources
Ethylbenzene	100-41-4	0.63		2.7	It is found in natural products such as coal tar and petroleum and is also found in manufactured products such as inks, insecticides, and paints. Ethylbenzene is used primarily to make another chemical, styrene. Other uses include as a solvent, in fuels, and to make other chemicals. ⁴
Xylene (p,m)	1330-20-7	1.9		8.3	It occurs naturally in petroleum and coal tar. Chemical industries produce xylene from petroleum. Xylene is used as a solvent and in the printing, rubber, and leather industries. It is also used as a cleaning agent, a thinner for paint, and in paints and varnishes. It is found in small amounts in airplane fuel and gasoline. ⁴ Water sealer, gasoline, automobile exhaust, markers, paint, floor polish and cigarette smoke. ¹
Xylene (Ortho)	95-47-6	0.74		3.2	It occurs naturally in petroleum and coal tar. Chemical industries produce xylene from petroleum. Xylene is used as a solvent and in the printing, rubber, and leather industries. It is also used as a cleaning agent, a thinner for paint, and in paints and varnishes. It is found in small amounts in airplane fuel and gasoline. ⁴ Water sealer, gasoline, automobile exhaust, markers, paint, floor polish and cigarette smoke. ¹
4-Ethyltoluene	622-96-8	1.3		6.4	Used in commercial products, building products, or wood office furnishings. Flat water thinned interior paints and tinting bases. Scatter rugs, bathmats, and sets. ¹¹
1,2,4-Trimethylbenzene	95-63-6	1.7		8.2	Gasoline additive and automobile exhaust. ¹

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E = Estimated concentration exceeding upper calibration range.

D = Result reported from diluted analysis.

Sources References

- (1) NJDEP "Common Household Sources of Background Indoor Air Contamination". June 26, 2012
- (2) NYSDOH "Volatile Organic Compounds (VOCs) in Commonly Used Products", 2007
- (3) EPA, Air & Radiation, TTN Web - Technology Transfer Network Air Toxics Web site, various years.
- (4) Agency for Toxic Substances and Disease Registry (ATSDR). U.S. Public Health Service, U.S. Department of Health and Human Services, Atlanta, GA. 1998.
- (5) OFFICE OF POLLUTION PREVENTION AND TOXICS, U.S. ENVIRONMENTAL PROTECTION AGENCY, August 1994, EPA 749-F-94-012a
- (6) U.S. Environmental Protection Agency, Office of Research and Development, Cincinnati, OH. 1985.
- (7) World Health Organization,
- (8) Product Safety Assessment, Revised: November 19, 2010 The Dow Chemical Company
- (9) California Office of Environmental Health Hazard Assessment, PROPOSED ACTION LEVEL FOR 2-CHLOROTOLUENE
- (10) Delaware Health and Social Services, Division of Public Health, Revised: 01/2010
- (11) USEPA, Envirofacts Master Chemical Integrator (EMCI), Scorecard, 4/10/2009